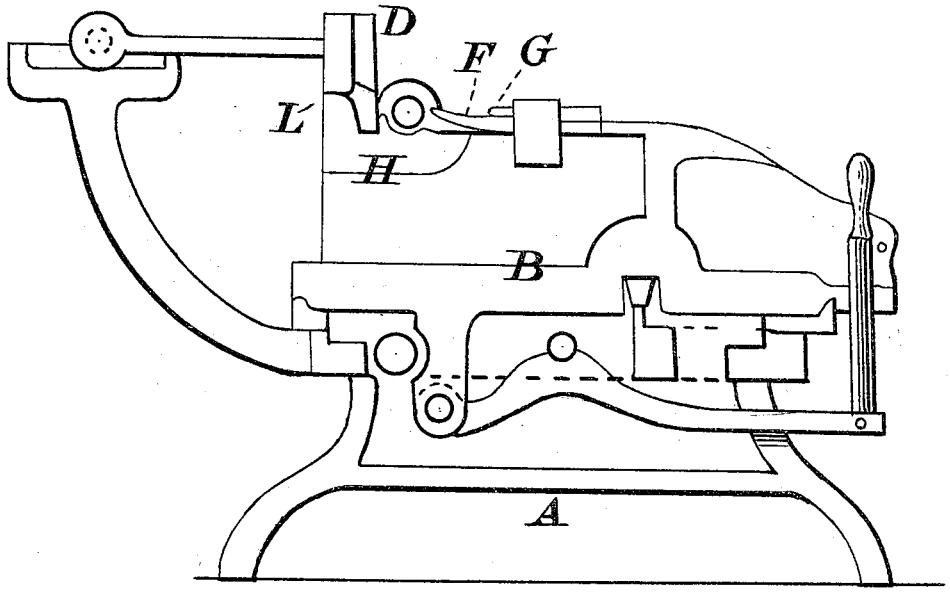
C. KILBURN.

LATHE ATTACHMENT.

No. 26,192. PATENTED NOV. 22, 1859.



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UNITED STATES PATENT OFFICE.

CHENEY KILBURN, OF BURLINGTON, VERMONT.

LATHE ATTACHMENT.

Specification of Letters Patent No. 26,192, dated November 22, 1859.

To all whom it may concern:

Be it known that I, CHENEY KILBURN, of Burlington, in Chittenden county and the State of Vermont, have invented certain new and useful Improvements in Wood-Turning Machines; and I do hereby declare the following to be a full, exact, and correct description of the same, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure I is a perspective view of my improved wood-turning machine, A showing an ordinary lathe; B, the carriage, to which are attached the gouging tool and V shaped cutter; also the recess and support which operates the finishing or smoothing knife. C, C are two mandrels for the purpose of holding in position the article to be turned. D shows the finishing or smoothing knife, attached to the arbor, by means of an arm, and resting on a flat plate. E shows the die. F shows the roughing tool; G, the V shaped cutter; H, the recess in the die (E) which in connection with the smoothing or finishing knife (D) serves to guide and steady the article being turned; I, the pattern which operates the V shaped cutter, and gives to the article being turned any desired design, figure or configuration; J, the arbor to which the arm supporting the smoothing or finishing knife D, is attached; K, the flat plate to which the finishing or smoothing knife is attached; L, the bar or support, attached to the die (E) and operating the knife (D).

Fig. II is a sectional view of the same, A showing an ordinary lathe; B, the carriage to which are attached the gouging tool and V shaped cutter. C shows one of the mandrels for the purpose of holding in position the article to be turned. D shows the finising or smoothing knife. E shows the die; F, the roughing tool; H, the recess in the die (E) which in connection with the smoothing or finishing knife (D) serves to guide and steady the article being turned; I, the pattern operating the V shaped cutter and giving to the article being turned the desired design, figure or configuration; K, the flat plate to which the finishing or smoothing knife (D) is attached.

The nature of my invention consists in the employment or use of the finishing knife (D) applied to a common turning lathe (A) generally used for turning beaded or ornamental work of wood and arranged and operated with the parts of said lathe (A) as hereinafter described so as to effect the desired result.

The difficulty hitherto attending the turning of beaded or ornamental work of wood, has been the roughness that accompanies the work, said roughness arising from the employment of the V shaped cutter (G) used to cut the small beads and concaves and the variety of the configurations given by the different patterns used.

The flat plate (K) to which is attached, directly upon its face, the finishing or smoothing knife (D) is of sufficient length for any piece that can be turned in the lathe (A); consequently there is no change of plates for long or short stuff. The finishing or smoothing knife (D) attached directly upon the face of the flat plate (K) has its cutting edge parallel with the lower edge of said plate (K) and may be made in one piece, the entire length of the article to be turned, or in sections, and for some patterns of work the latter mode would be desirable. The desired form, pattern or configuration on the face of the said smoothing knife (D) may be given, by turning the same, attached to the plate (K) in a common lathe for turning iron. The figure, design or form produced upon the article being turned is the reverse of that given upon the face or front of the finishing or smoothing knife (D). The cutting edge of the finishing or smoothing knife (D) has an oblique position to the article being turned, while the lower edge of the plate (K) supporting the knife (D) bears or rests upon and is operated by, a bar or support (L) attached to the movable carriage (B) giving to the knife a rotating reciprocating motion. I would here remark that this plate (K) upon the face of which is attached the knife (D) is attached to an arm, connected to the arbor (J). The knife (D) is rendered adjustable by means of slots in the plate, so that as the edge wears off, the same can be moved down to the right point for cutting. To accommodate the knife to stuff of different diameter, to be turned the arbor is rendered adjustable by slots in the boxes holding the arbor (J) in position.

The mode of operating is as follows: The article to be turned is placed and held between two mandrels (C C). As the carriage (B) to which is attached the gouging tool (F) placed upon one side of the die (E)

moves along, the same is rounded, and as it is, so rounded, it is operated upon by the V shaped cutter (G) placed upon the other side of the die (E), this V shaped cutter being actuated by the pattern (I) and giving to the article being turned the desired form, figure or design. As the carriage (B) moves along, the lower edge of the plate (K) resting on a bar or support (L) attached to the die (E), rotates, thereby bringing the smoothing or finishing knife (D) in contact with the article being turned. This knife (D) moving in concert with the carriage (B) but a small portion of the cutting edge of the knife is finishing at any one time, being relieved as the carriage (B) moves along and followed by another portion of the cutting edge until the article is turned its entire length. This knife (D) directly following after the V shaped cutter (G) finishes or smoothes the work of the same, and bearing upon the article being turned, at its side, nearly opposite the V shaped cutter (G) at the point it is cutting, serves to steady the article being turned and from the fact that the lower portion of the knife is made wider than the upper portion, it bears at a greater distance lengthwise on the article being turned and prevents much of the tremulous motion usually attendant upon wood-turning. The article being turned also receives the support and guide of the recess (H) as the same is made to follow immediately after the gouging tool (F) and in close connection with the V shaped cutter (G). By this means simple in its character, not much cost is added to the original machine, while the advantages afforded enhance its value materially.

I am fully aware that I am not the first person to apply a finishing or smoothing knife to a wood-turning machine.

What I claim as new and desire to secure by Letters Patent is—

The rotating-reciprocating knife (D) in combination with the carriage (B) provided with the gouging tool (F), and V shaped cutter (G) pattern (I) recess (H) and support (L) when arranged and operated as herein set forth and for the purpose specified.

CHENEY KILBURN.

Witnesses:
ALBERT PALMER,
A. SIDNEY DOANE.